

Household Analysis Review Group (HARG)

2014-Based Household Projections: Provisional Results

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The results presented in this paper are provisional.

They are likely to differ from the final household projections published.

**Please treat these figures as ‘restricted’ until after publication on 31 January 2017,
and do not use them, tell anyone the results or pass them on to anyone else without
prior agreement from the National Records of Scotland (NRS).**

1. Purpose

This paper describes the draft 2014-based household projections, due to be published by the National Records of Scotland (NRS) on 31 January. It discusses the methodology used and results obtained, as well as looking at differences from the 2012-based household projections.

2. Methodology

Household projections are produced every two years. The method and data used for the 2014-based household projections have not changed from what was used for the 2012-based projections. Overviews of the methods and data used are shown in [Annex A](#).

The main change is that the methodology used to produce the 2014-based sub-national population projections has changed. This will affect the results of the household projections. The changes to the population projections, and the impacts on the household projections, are discussed in paper 1 HARG 2016(1).

2.1 Variant Projections

As before, two variant projections will be produced alongside the principal household projection. These projections use the low and high migration variant population projections, but in all other respects the method used for these projections is identical to the method used for the principal projection.

2.2 Weighting

The headship rates are weighted using 2014 Scottish Household Survey data (for more information on this, refer to [Annex A](#)). The weights that produced projections with the most similar distribution of households by type in the 2014 Scottish Household Survey were:

- 80 per cent towards headship rates projected using 2001 and 2011 Census data, and
- 20 per cent towards rates produced using 1991 and 2001 Census data.

In the 2012-based projections, the equivalent weights were 77 per cent and 23 per cent.

2.3 Minimum adult and child adjustments

Sometimes it is necessary to adjust the household types in some Council areas, to ensure that there are enough adults and children in the population projections to fill all the households. For this set of projections, these adjustments were not required for any Council areas.

3. Results of the provisional 2014-based household projections

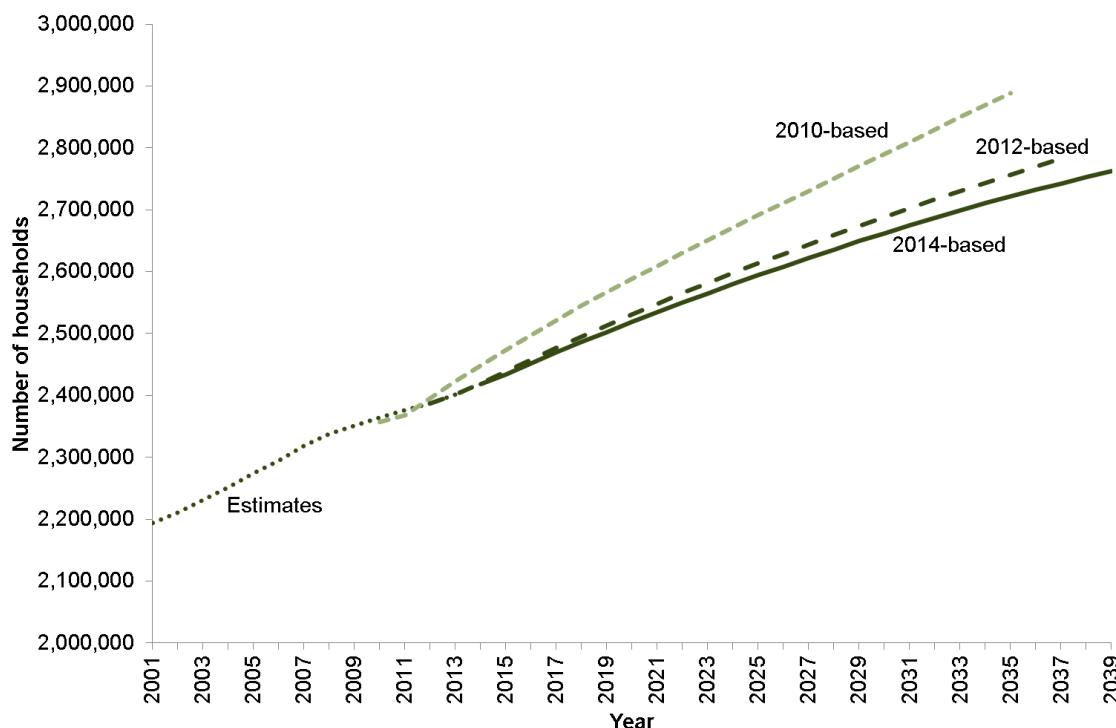
3.1 Total number of households

[Figure 1](#) compares the projected total number of households in the provisional 2014-based projections with the 2010- and 2012-based projections, as well as showing the household estimates since 2001. The 2012-based household projections were quite a bit lower than the previous, 2010-based projections, as we made a number of significant changes to the input data and methods, including incorporating the results from Scotland's Census 2011, and including survey data for

the first time. This meant that they provided a better reflection of changes in household types which resulted from the fall in house-building since 2007/8 and economic changes which have made it more difficult for young adults to buy their own home.

The provisional 2014-based projections are lower than the 2012-based projections. This reflects the fact that the equivalent population projections are also lower.

Figure 1: Comparison of the 2014-based household projections with previous household projections, and household estimates

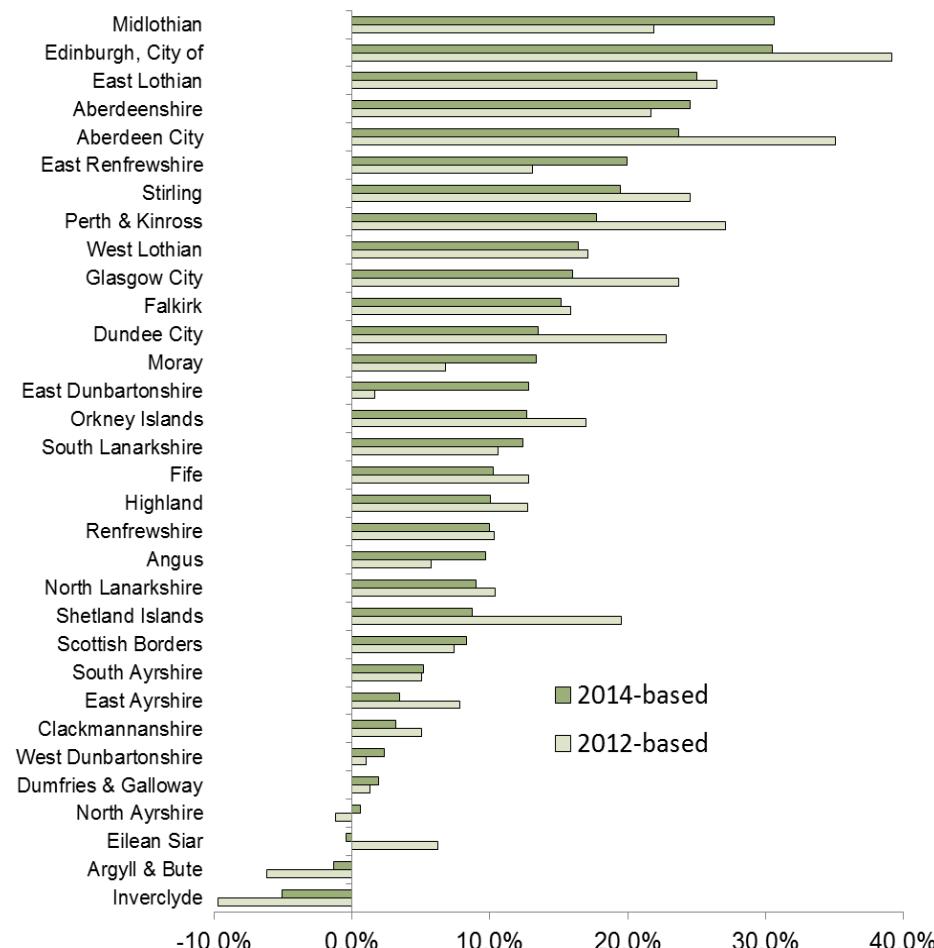


3.2 Council areas

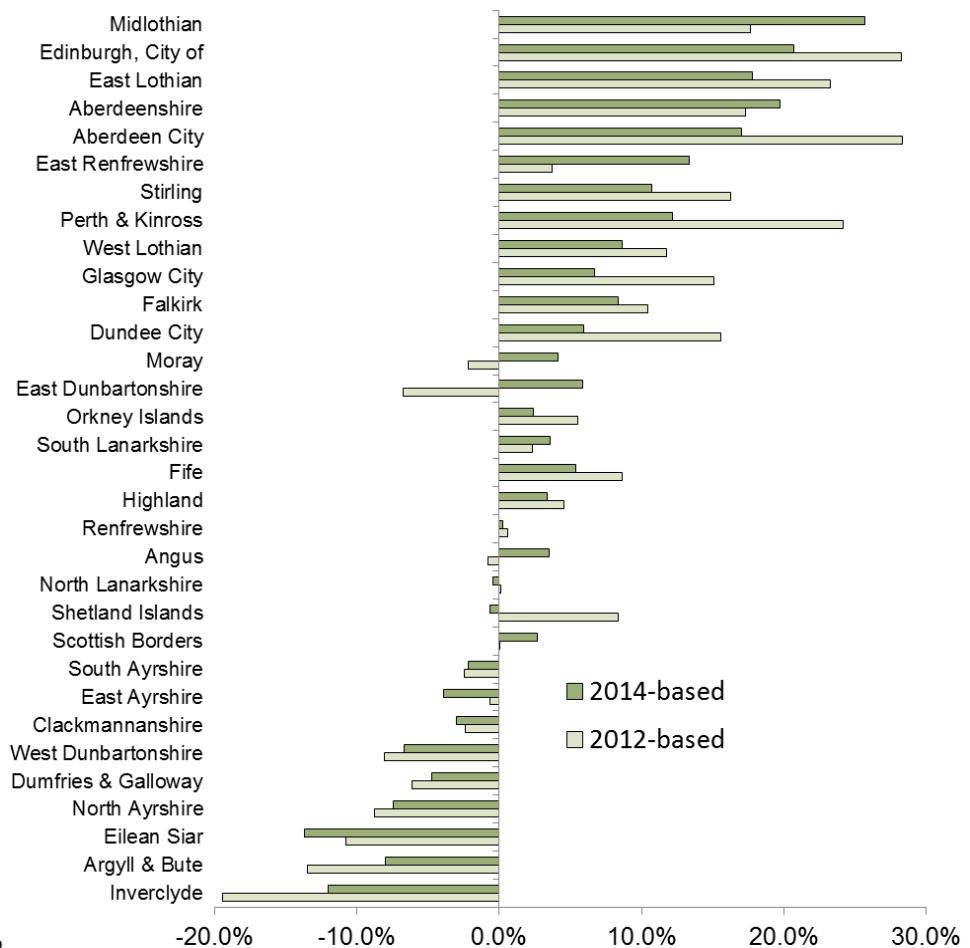
Figure 2 shows the percentage change in the number of households for each council area in the 2012- and 2014-based projections. The same figures are shown in Table 1 in Annex B. In general, the 2014-based projections are lower, but this is not the case for all council areas. Figure 2 also shows the equivalent figures for the population projections, which shows the relationship between the two sets of figures. The average percentage change in the household projections is higher than in the population projections due to more people living alone or in smaller households. However, the overall patterns are similar in both sets of projections. For example, there has been an increase in both the population and household projections in Midlothian, between the 2012-based and 2014-based projections.

Figure 2: Percentage change over 25 years in the 2012- and 2014-based household and population projections¹

a) Household projections



b) Population projections



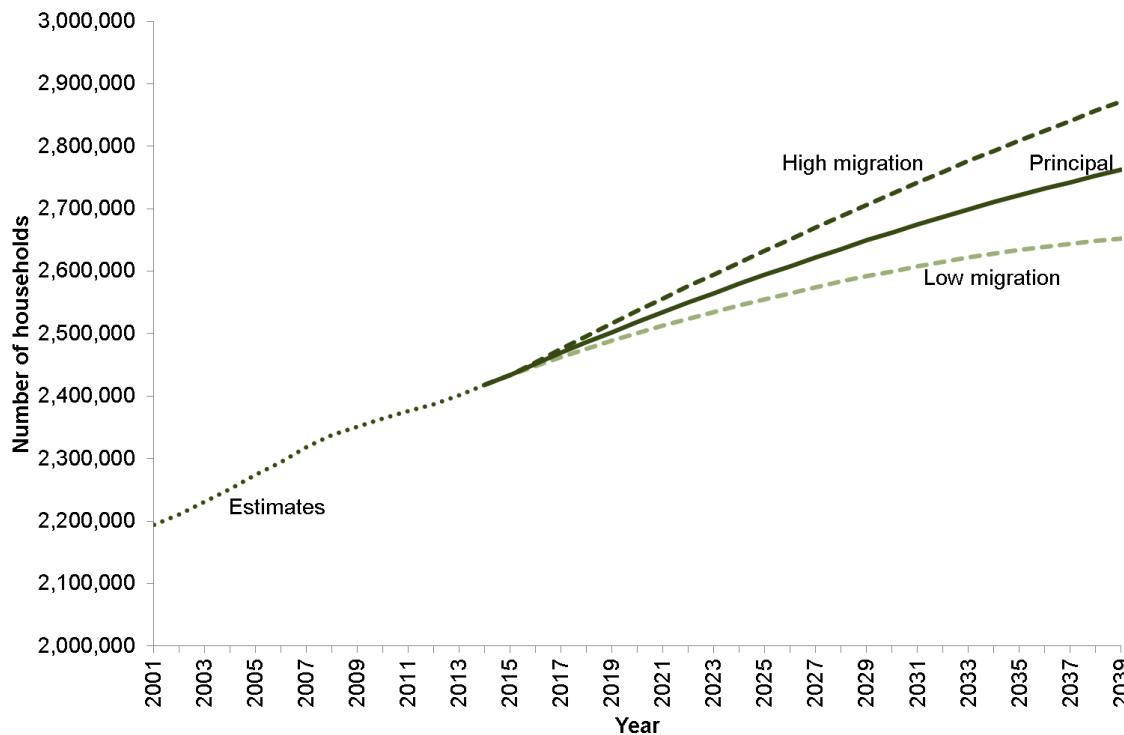
Footnote

1) These charts compare the change from 2012 to 2037 in the 2012-based projections with the change from 2014 to 2039 in the 2014-based projections.

3.3 Variant projections

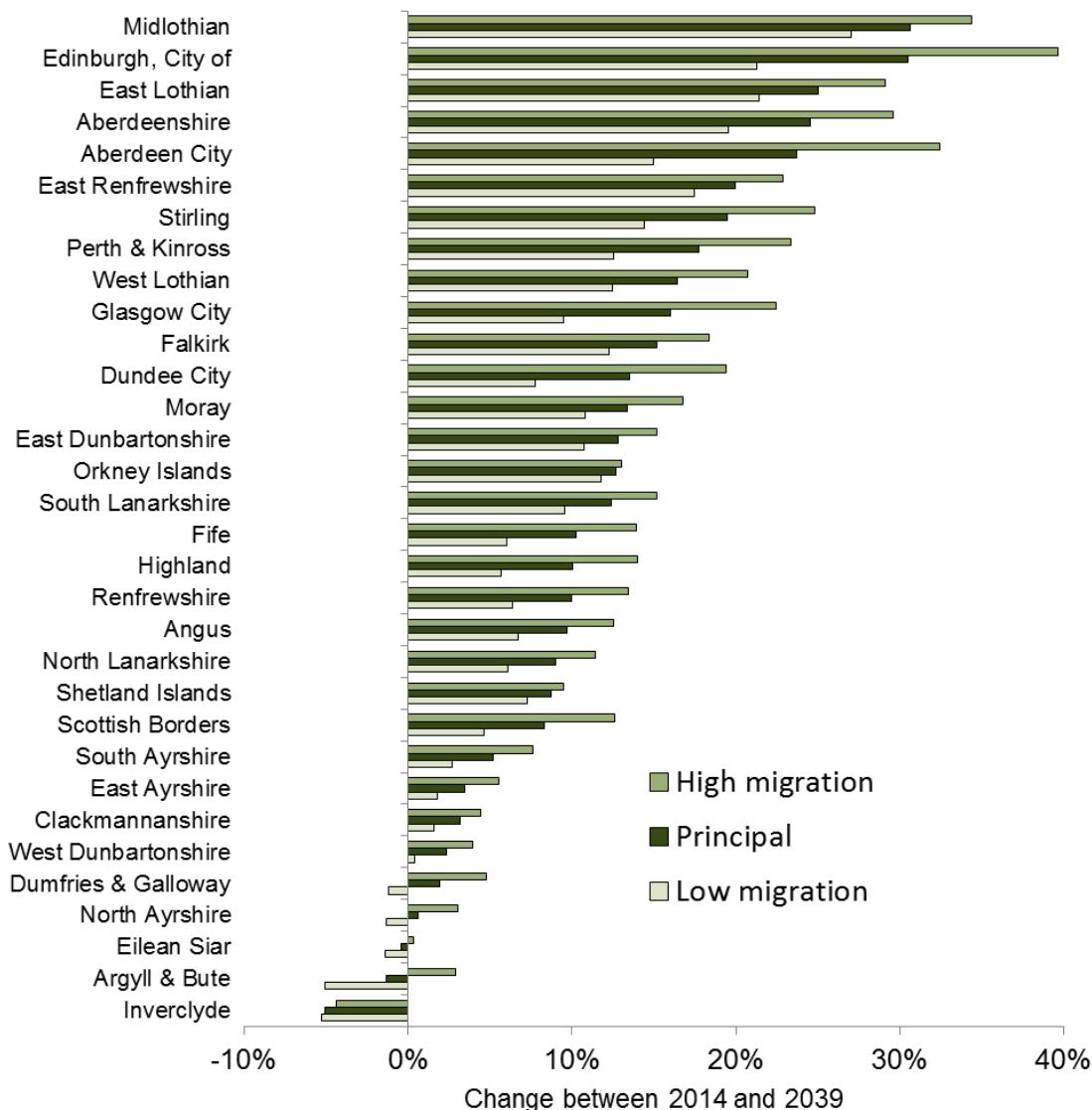
Figure 3 shows the principal household projection for Scotland as well as the two variant projections – high migration, and low migration. They incorporate figures from the equivalent population projection variants.

Figure 3: Principal, high and low migration variant household projections



[Figure 4](#) shows principal, high and low migration variants for each council area. The same figures are shown in [Table 2](#) in [Annex B](#). The migration variants have a bigger effect in council areas with large amounts of migration, such as the City of Edinburgh, than they do in areas with lower levels of migration, such as Orkney Islands.

Figure 4: Percentage change in the household projections between 2014 and 2039 – principal, high and low migration variants

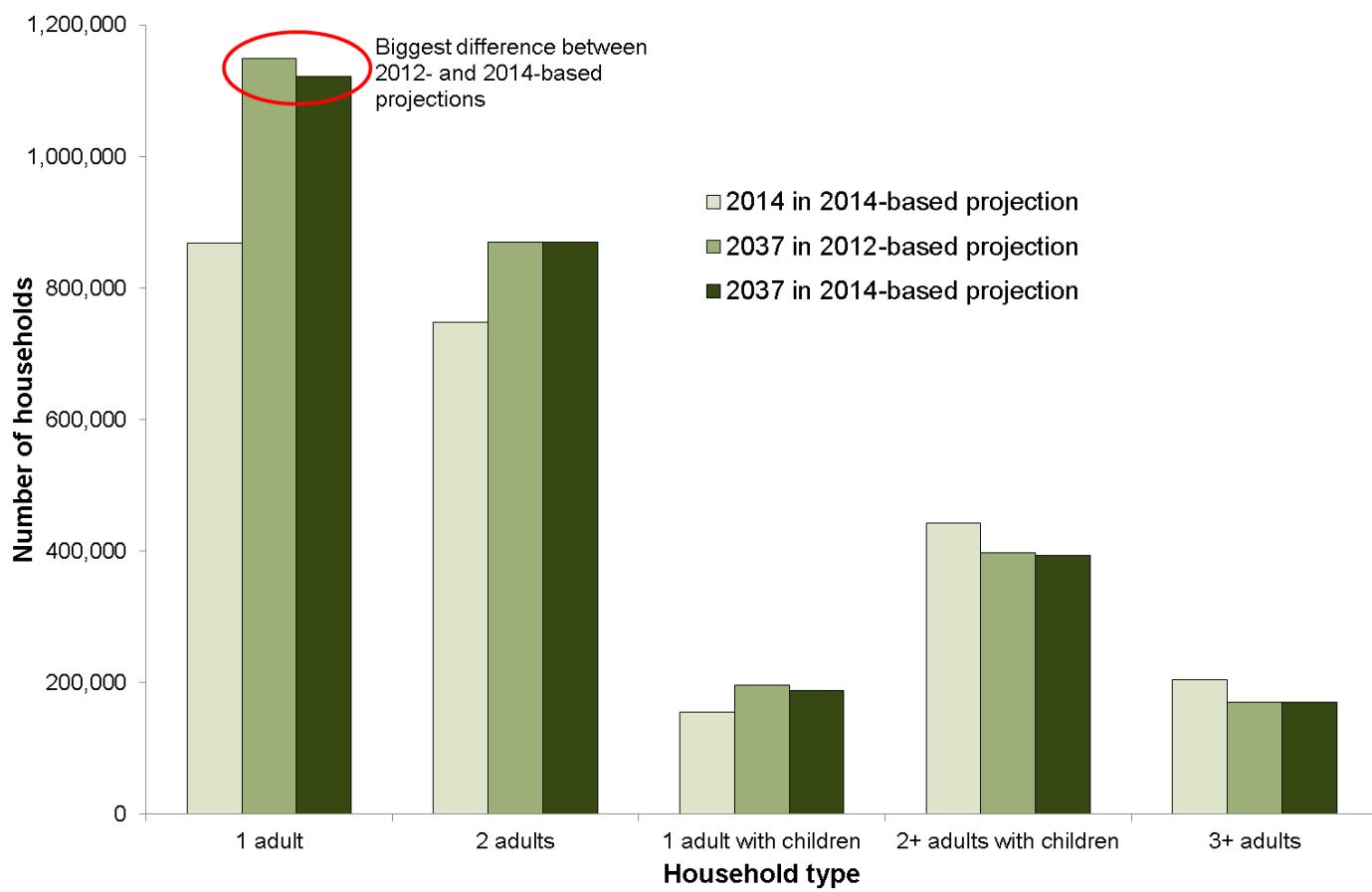


3.4 Household types

Figure 5 shows the projected number of households by household type, in 2014 and in 2037, comparing the 2012- and 2014-based projections. The same overall trends in household numbers are seen, with increases in smaller households (one or two adults) and decreases in the number of larger households.

The biggest difference between the 2012- and 2014-based projections is that the projected number of one adult households is lower in the 2014-based projections. This is mainly due to reductions in the number of young adults living alone, and also a reduction in the number of women aged 85+, who are most likely to live alone. This is discussed in more detail in [Section 3.6](#).

Figure 5: Number of households by type in Scotland in 2014 and 2037: 2012- and 2014-based projections



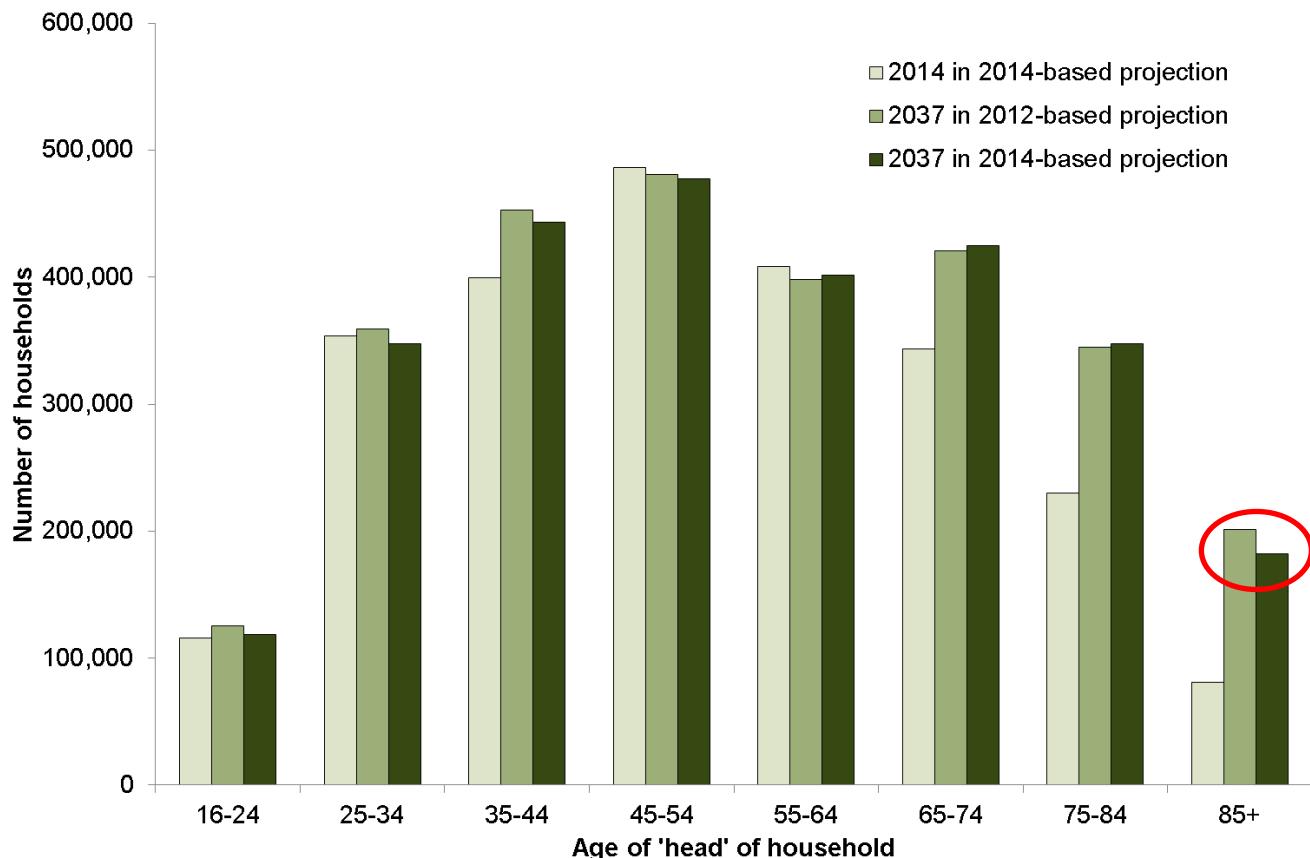
3.5 Age groups

Figure 6 shows the projected number of households by the age group of the ‘head’ of household², in 2014 and in 2037, comparing the 2012- and 2014-based projections. As with the 2012-based projections, the biggest projected increases are in the older age groups (age 65+). The main differences between the 2012- and 2014-based household projections are lower projected figures in the younger age groups (16-44), and those aged 85+.

Footnote

- 2) The ‘head’ of household is normally the first adult on the census form.

Figure 6: Number of households by age of 'head' of household in Scotland in 2014 and 2037: 2012- and 2014-based projections



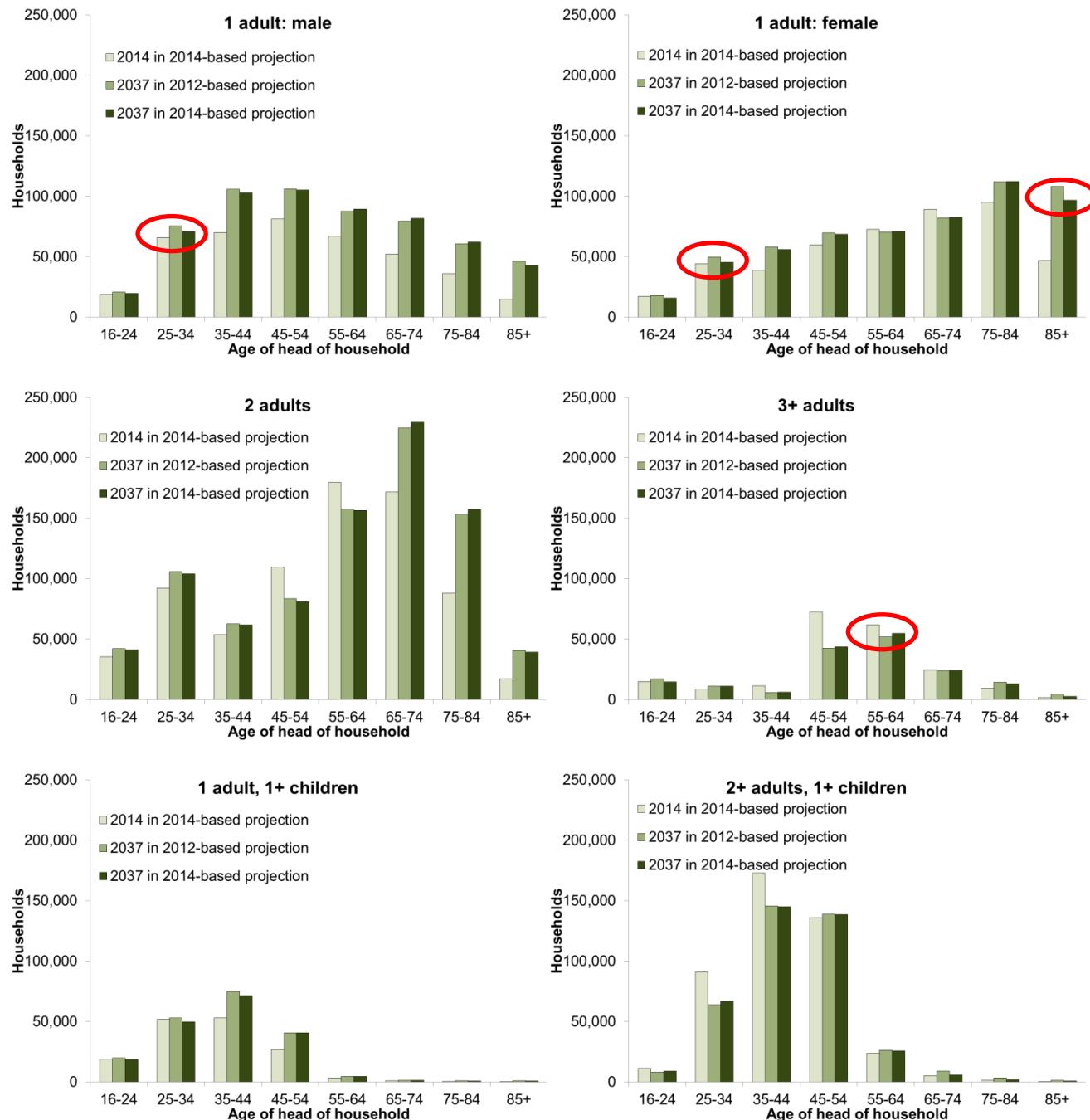
3.6 Age group by head of household

[Figure 7](#) shows each projected household type, by age of the 'head' of household in 2014 and in 2037, comparing the 2012- and 2014-based projections.

When comparing the 2012- and 2014-based projections, the biggest differences are circled in red on [Figure 7](#). They show:

- Fewer households containing just one adult aged 25-34. This is likely to be due to falls in the number of young adults forming their own households, as more are living with parents or renting with others.
- There are large projected increases in the number of adults aged 85+ living alone, between 2014 and 2037. However, the 2014-based projections show a smaller increase in the numbers of women aged 85+ living alone, compared to the 2012-based projections. This is likely to be due to the 2014-based population projections for this age group being lower, as they assumed a lower increase in life expectancy.
- More households containing three or more households, headed by someone aged 55-64. This is likely to be due to more young adults living with their parents for longer.

Figure 7: Number of households by age of head of household and household type in Scotland in 2014 and 2037, 2012- and 2014-based projections



4. Conclusions

The main difference between the 2012- and 2014-based household projections is that the methodology has changed in the 2014-based sub-nation population projections, which feed into the household projections. This has had an effect on the household projections results, with the biggest changes being at council level, rather than for Scotland as a whole. Where the figures are different, the differences can be explained.

5. Next Steps

NRS will produce final 2014-based household projections using finalised input data. They will be published on 31 January 2017.

HARG members are asked to note these initial findings and pass on any comments.

One final reminder that these statistics are provisional. Please treat the figures as 'restricted' until after publication on 31 January 2017, and do not use them, tell anyone the results or pass them on to anyone else before then. If you think you need to discuss these statistics with anyone else, please contact the household estimates and projections team in NRS first.

NRS: Household Estimates and Projections Branch

November 2016

Annex A: Methods and data used in the 2014-based household projections

The 2014-based household projections for Scotland are based on the 2014-based sub-national population projections published by NRS in October 2016. The household projections are produced in a number of stages:

- The number of people living in communal establishments is collected from a range of administrative data sources and subtracted from the population projections to estimate the number of people living in private households.
- Information on the types of households, in the form of ‘headship rates’, is taken from the 1991, 2001 and 2011 Censuses. Two sets of projected headship rates are produced; one using headship rates from the 1991 and 2001 Censuses, and the other using headship rates from the 2001 and 2011 Censuses. The two sets of projected headship rates are then combined into a final set of headship rates using weights chosen so that the projection for 2014 has a distribution of households across the seven household types that is as close as possible to the distribution found in the 2014 Scottish Household Survey data.
- The combined headship rates are applied to the estimated population living in private households to get raw household projections by type of household, age of head of household and council area.
- Council area figures are constrained to the household projections for Scotland, and the 2014 and 2015 household estimates. If necessary, minimum adult/child adjustments are made to ensure that there are enough people in the population projections to fill all the households. Once these adjustments have been performed we have the final set of household projections.

The household types and age groups used are given in Table A.

Table A: Age groups and household types used in the final projections

Age of head of household	Household types
16-19	
20-24	1 Adult – Male
25-29	1 Adult – Female
30-34	2 Adults
35-39	3+ Adults
40-44	1 Adult + 1 Child
45-49	1 Adult , 2+ Children
50-54	2+ Adults, 1+ Children
55-59	
60-64	
65-69	
70-74	
75-79	
80-84	
85-89	
90+	

Annex B: Tables**Table 1: Provisional 2014-based household projections by council area**

Council area	2014	2039	Change, 2014-2039	
Aberdeen City	105,287	130,283	24,996	24%
Aberdeenshire	108,381	135,008	26,627	25%
Angus	52,692	57,795	5,103	10%
Argyll & Bute	40,857	40,302	-555	-1%
Clackmannanshire	23,217	23,950	733	3%
Dumfries & Galloway	68,818	70,122	1,304	2%
Dundee City	69,610	78,993	9,383	13%
East Ayrshire	54,401	56,278	1,877	3%
East Dunbartonshire	44,504	50,214	5,710	13%
East Lothian	43,981	54,989	11,008	25%
East Renfrewshire	38,048	45,656	7,608	20%
Edinburgh, City of	229,792	299,825	70,033	30%
Eilean Siar	12,920	12,867	-53	0%
Falkirk	69,693	80,272	10,579	15%
Fife	163,958	180,767	16,809	10%
Glasgow City	288,137	334,291	46,154	16%
Highland	105,711	116,350	10,639	10%
Inverclyde	37,384	35,496	-1,888	-5%
Midlothian	36,602	47,828	11,226	31%
Moray	41,288	46,820	5,532	13%
North Ayrshire	62,802	63,167	365	1%
North Lanarkshire	148,610	161,965	13,355	9%
Orkney Islands	10,042	11,318	1,276	13%
Perth & Kinross	66,035	77,739	11,704	18%
Renfrewshire	82,385	90,577	8,192	10%
Scottish Borders	53,157	57,591	4,434	8%
Shetland Islands	10,166	11,054	888	9%
South Ayrshire	51,874	54,555	2,681	5%
South Lanarkshire	142,286	159,934	17,648	12%
Stirling	38,310	45,762	7,452	19%
West Dunbartonshire	42,353	43,354	1,001	2%
West Lothian	75,035	87,375	12,340	16%
Scotland	2,418,336	2,762,498	344,162	14%

Table 2: Provisional 2014-based household projections by council area, including high and low migration variants

Council area	2014 All	2039			Change, 2014-2039		
		Low migration	Principal	High migration	Low migration	Principal	High migration
Aberdeen City	105,287	121,031	130,283	139,432	15%	24%	32%
Aberdeenshire	108,381	129,555	135,008	140,457	20%	25%	30%
Angus	52,692	56,238	57,795	59,298	7%	10%	13%
Argyll & Bute	40,857	38,778	40,302	42,055	-5%	-1%	3%
Clackmannanshire	23,217	23,580	23,950	24,239	2%	3%	4%
Dumfries & Galloway	68,818	67,985	70,122	72,098	-1%	2%	5%
Dundee City	69,610	75,014	78,993	83,099	8%	13%	19%
East Ayrshire	54,401	55,384	56,278	57,401	2%	3%	6%
East Dunbartonshire	44,504	49,268	50,214	51,269	11%	13%	15%
East Lothian	43,981	53,386	54,989	56,788	21%	25%	29%
East Renfrewshire	38,048	44,698	45,656	46,757	17%	20%	23%
Edinburgh, City of	229,792	278,693	299,825	320,934	21%	30%	40%
Eilean Siar	12,920	12,739	12,867	12,965	-1%	0%	0%
Falkirk	69,693	78,252	80,272	82,478	12%	15%	18%
Fife	163,958	173,814	180,767	186,805	6%	10%	14%
Glasgow City	288,137	315,551	334,291	352,898	10%	16%	22%
Highland	105,711	111,692	116,350	120,489	6%	10%	14%
Inverclyde	37,384	35,411	35,496	35,751	-5%	-5%	-4%
Midlothian	36,602	46,506	47,828	49,178	27%	31%	34%
Moray	41,288	45,742	46,820	48,226	11%	13%	17%
North Ayrshire	62,802	61,946	63,167	64,689	-1%	1%	3%
North Lanarkshire	148,610	157,707	161,965	165,563	6%	9%	11%
Orkney Islands	10,042	11,226	11,318	11,350	12%	13%	13%
Perth & Kinross	66,035	74,322	77,739	81,462	13%	18%	23%
Renfrewshire	82,385	87,602	90,577	93,451	6%	10%	13%
Scottish Borders	53,157	55,618	57,591	59,858	5%	8%	13%
Shetland Islands	10,166	10,906	11,054	11,134	7%	9%	10%
South Ayrshire	51,874	53,278	54,555	55,817	3%	5%	8%
South Lanarkshire	142,286	155,844	159,934	163,892	10%	12%	15%
Stirling	38,310	43,819	45,762	47,817	14%	19%	25%
West Dunbartonshire	42,353	42,510	43,354	44,032	0%	2%	4%
West Lothian	75,035	84,406	87,375	90,593	12%	16%	21%
Scotland	2,418,336	2,652,501	2,762,498	2,872,275	10%	14%	19%